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EXAMINER

SUGENT, JAMES F

| | |
|----------|--------------|
| ART UNIT | PAPER NUMBER |
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2116

DATE MAILED: 09/20/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

| | | | |
|------------------------------|-------------------------------|-------------------------------------|--|
| Office Action Summary | Application No. 10/820,976 | Applicant(s) TEMPLETON, JAMES W. | |
| | Examiner James F. Sugent | Art Unit 2116 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 08 April 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-39 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-39 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>4/5/06 & 5/1/06</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

This Office Action is sent in response to Applicant's Communication received April 8, 2004 for application number 10/820976. The Office hereby acknowledges receipt of the

5 following and placed of record in file: Specification, Drawings, Abstract, Oath/Declaration and Claims 1-39 are presented for examination.

Information Disclosure Statement

The information disclosure statement (IDS) submitted on April 5, 2006 and May 1, 2006
10 were filed. The submission is in compliance with the provisions of 37 CFR 1.97. Accordingly, the information disclosure statement is being considered by the examiner.

Although the IDS (submitted April 5, 2006) has been considered and placed in record, in responding to those requirements that require copies of documents, where the document is a bound text or a single article over 50 pages (items A5, A28, A30, A31 and A34 from IDS
15 submitted April 5, 2006), the requirement may be met by providing copies of those pages that provide the particular subject matter indicated in the requirement, or where such subject matter is not indicated, the subject matter found in applicant's disclosure.

Oath/Declaration

20 The Oath/Declaration submitted April 8, 2004 has been received, placed of record in file and accepted.

Double Patenting

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the “right to exclude” granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

Claims 1 and 35 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 15 and 22 of copending Application No. 11/356674 (hereinafter referred to as ‘674). Although the conflicting claims are not identical, they are not patentably distinct from each other because:

- In re claim 1 of the instant invention claims the same elements recited in claim 15 of ‘674. They are not patently distinct because they both claim: i) a bus; ii) a plurality of power management devices/regulators that deliver power/voltage to loads/devices; iii) control voltages/functions; and, iv) exchange information over the bus. Though ‘674 does not explicitly disclose a controller, it does claim *controlling* which necessitates a controller.

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- In re claim 1 of the instant invention claims the same elements recited in claim 22 of '674. They are not patently distinct because they both claim: i) a bus; ii) a plurality of power management devices/regulators that deliver power/voltage to loads/devices; iii) control voltages/functions; and, iv) exchange information over the bus. Though '674 does not explicitly disclose a controller, it does claim *controlling* which necessitates a controller.
- In re claim 35 of the instant invention claims the same elements recited in claim 15 of '674. They are not patently distinct because they both claim: i) a bus; ii) a plurality of power management devices/regulators that deliver power/voltage to loads/devices; iii) control voltages/functions; and, iv) exchange information over the bus to coordinate functions/voltages. Though '674 does not explicitly disclose a controller, it does claim *controlling* which necessitates a controller.
- In re claim 35 of the instant invention claims the same elements recited in claim 22 of '674. They are not patently distinct because they both claim: i) a bus; ii) a plurality of power management devices/regulators that deliver power/voltage to loads/devices; iii) control voltages/functions; and, iv) exchange information over the bus to coordinate functions/voltages. Though '674 does not explicitly disclose a controller, it does claim *controlling* which necessitates a controller.

This is a provisional obviousness-type double patenting rejection because the conflicting

claims have not in fact been patented.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000. Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

Claims 1-34 are rejected under 35 U.S.C. 102(e) as being anticipated by Chapuis et al. (U.S. Patent No. 7,049,798 B2) (hereinafter referred to as Chapuis1) (cited by Applicant).

As to claim 1, Chapuis1 discloses a power delivery management system (20), the system comprising: a plurality of digital power management devices (220, 230, 240 and 250), wherein each of the plurality of power management devices comprises a plurality of functions (configuration data from 210), wherein each of the plurality of power management devices is operable to provide power to one or more point of load devices (Though the point of load

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devices are not explicitly shown, Chapius1 does disclose providing a load to a circuit; column 1, lines 14-37) (column 4, lines 17-30 and column 4, lines 51-67); and a control and communication bus (200), wherein each one of the plurality of digital power management devices is coupled to the control and communication bus (as shown in fig. 2); wherein each
5 respective one of the plurality of digital power management devices includes a controller (310) operable to control the functions of the respective digital power management device (column 5, lines 13-63); and wherein the plurality of digital power management devices exchange information over the control and communication bus (via controller 210) to coordinate (synchronize) their functions (column 6, lines 36-52).

10 As to claim 2, Chapius1 further discloses the system of claim 1, wherein at least one of the plurality of digital power management devices is also operable to coordinate the functions of one or more other ones of the plurality of digital power management devices (Chapius1 discloses the individual converters transferring a single bit to the other converters to synchronize the clocking; column 6, lines 36-52).

15 As to claim 3, it is directed to the system of steps set forth in claims 1 and 2. Therefore, it is rejected for the same basis as set forth hereinabove.

As to claim 4, Chapius1 further discloses the system of claim 1, wherein the plurality of functions comprise one or more power delivery functions (as shown in the list of functions; column 4, lines 53-64); wherein each respective one of the plurality of digital power
20 management devices includes a controller (310) operable to control the one or more power delivery functions of the respective digital power management device (column 5, lines 13-46).

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As to claim 5, Chapius1 further discloses the system of claim 1, wherein at least a subset of the plurality of digital power management devices each comprise the same functions (column 4, line 51 thru column 5, line 12).

As to claim 6, Chapius1 further discloses the system of claim 1, wherein one or more of the plurality of digital power management devices comprises a voltage converter unit (column 4, lines 17-30).

As to claim 7, it is directed to the system of steps set forth in claims 1 and 6. Therefore, it is rejected for the same basis as set forth hereinabove.

As to claim 8, Chapius1 further discloses the system of claim 1, wherein the control and communication bus is a digital bus (column 6, lines 36-52).

As to claims 9-12, they are directed to the system of steps set forth in claim 1 and 8. Therefore, it is rejected for the same basis as set forth hereinabove.

As to claim 13, Chapius1 further discloses the system of claim 1, wherein each individual one of the plurality of digital power management devices is operable to be programmed and/or configured across the control and communication bus (column 4, line 51 thru column 5, line 12).

As to claim 14, Chapius1 further discloses the system of claim 1, wherein two or more of the plurality of digital power management devices are operable to be grouped together in a current sharing configuration (column 5, lines 13-46).

As to claims 15-19, they are directed to the system of steps set forth in claims 1 and 14. Therefore, it is rejected for the same basis as set forth hereinabove.

As to claim 20, Chapius1 further discloses the system of claim 1, wherein each one of the plurality of digital power management devices is operable to provide feedback data to all other ones of the plurality of digital power management devices (column 5, lines 13-63).

As to claim 21, it is directed to the system of steps set forth in claim1 and 20. Therefore,
5 it is rejected for the same basis as set forth hereinabove.

As to claim 22, Chapius1 further discloses the system of claim 1, wherein the functions of the plurality of digital power management devices comprise at least one of: supply sequencing; phase offset adjustment; current sharing; voltage programming and voltage tracking; and ramp rate control (column 5, line 13 thru column 6, line 20).

10 As to claims 23 and 24, they are directed to the system of steps set forth in claims 1 and 22. Therefore, it is rejected for the same basis as set forth hereinabove.

As to claim 25, Chapius1 further discloses the system of claim 1, wherein the functional features of the plurality of digital power management devices include margining (column 5, line 13 thru column 6, line 20).

15 As to claim 26, Chapius1 further discloses the system of claim 1, wherein the functional features of the plurality of digital power management devices include voltage supply sequencing (column 5, line 13 thru column 6, line 20).

As to claim 27, Chapius1 further discloses the system of claim 1 further comprising at least one master control device (210) coupled to the control and communication bus. wherein the
20 at least one master control device is operable to centrally control the plurality of digital power management devices to implement advanced features (column 4, line 17 thru column 5, line 12).

As to claims 28 and 29, they are directed to the system of steps set forth in claims 1 and 27. Therefore, it is rejected for the same basis as set forth hereinabove.

As to claim 30, Chapius1 further discloses the system of claim 1, wherein each one of the plurality of digital power management devices is operable to automatically self-test (column 4, line 17 thru column 5, line 12).

As to claim 31, Chapius1 further discloses the system of claim 1, wherein each one of the plurality of digital power management devices is operable to auto-calibrate (column 7, line 55 thru column 8, line 17).

As to claim 32, Chapius1 further discloses the system of claim 1, wherein the power delivery management system is comprised on a printed circuit board; wherein each of the plurality of digital power management devices is distributed on the printed circuit board (column 4, lines 31-50).

As to claim 33, Chapius1 further discloses the system of claim 1, wherein each of the plurality of digital power management devices comprises an integrated circuit (column 4, lines 31-50).

As to claim 34, Chapius1 further discloses the system of claim 1, wherein the control and communication bus is a serial bus (column 6, lines 36-52).

Claim 1 is also rejected under 35 U.S.C. 102(e) as being anticipated by Chapius et al. (U.S. Patent No. 7,000,125 B2) (hereinafter referred to as Chapius2) (cited by Applicant).

As to claim 1, Chapius2 discloses a power delivery management system (100), the system comprising: a plurality of digital power management devices (106, 108, 110, 112 and 114), wherein each of the plurality of power management devices comprises a plurality of

functions (configuration data), wherein each of the plurality of power management devices is operable to provide power to one or more point of load devices (Though the point of load devices are not explicitly shown, Chapius2 does disclose providing a load to a circuit; column 1, lines 13-30) (column 4, lines 35-57 and column 5, lines 24-49); and a control and

5 communication bus (OK/FAULT and SYNCH/DATA buses), wherein each one of the plurality of digital power management devices is coupled to the control and communication bus (as shown in fig. 3); wherein each respective one of the plurality of digital power management devices includes a controller (146) operable to control the functions of the respective digital power management device (column 5, lines 24-49); and wherein the plurality of digital power

10 management devices exchange information (via controller 102) over the control and communication bus to coordinate (synchronize) their functions (column 5, lines 1-49).

Claims 35-39 are rejected under 35 U.S.C. 102(e) as being anticipated by Chapius et al. (U.S. Patent Publication No. 2004/0093533 A1) (hereinafter referred to as Chapius3) (cited by

15 Applicant).

As to claim 35, Chapius3 discloses a power delivery management system (20), the system comprising: a plurality of voltage converter units (220, 230, 240 and 250), wherein each of the plurality of voltage converter units is operable to provide power to one or more point of load devices (Though the point of load devices are not explicitly shown, Chapius3 does disclose

20 providing a load to a circuit; paragraphs 4 and 5) (paragraphs 8 and 25); a digital control and communication bus (200), wherein each one of the plurality of voltage converter units is coupled to the digital control and communication bus (as shown in fig. 2); and a master control device

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(210) coupled to the digital control and communication bus (as shown in fig. 2); wherein the master control device is operable to control the plurality of voltage converter units through communicating with the plurality of voltage converter units over the digital control and communication bus (paragraphs 8 and 25).

5 As to claim 36, Chapius3 further discloses the system of claim 35, wherein the digital control and communication bus is a serial digital control and communication bus (paragraph 32).

 As to claim 37, Chapius3 further discloses the system of claim 35, wherein said communicating with the plurality of voltage converter units comprises each one of the plurality of voltage converter units providing feedback data to the master control device (paragraph 33).

10 As to claim 38, Chapius3 further discloses the system of claim 35, wherein the master control device comprises a controller operable to execute functions corresponding to each of the plurality of voltage converter units to control the plurality of voltage controller units (paragraphs 27-29).

 As to claim 39, Chapius3 further discloses the system of claim 35, wherein the plurality
15 of voltage converter units provide status information over the digital control and communication bus to the master control device (paragraphs 27-29).

 Claim 35 is also rejected under 35 U.S.C. 102(e) as being anticipated by Duffy et al. (W.O. International Publication No. 02/31943 A2) (hereinafter referred to as Duffy) (cited by Applicant).

20 As to claim 35, Duffy discloses a power delivery management system (100), the system comprising: a plurality of voltage converter units (104), wherein each of the plurality of voltage converter units is operable to provide power to one or more point of load devices (Though the

point of load devices are not explicitly shown, Duffy does disclose providing a load to a circuit; page 4, lines 1-4) (page 3, lines 19-21 and page 3, lines 26-29); a digital control and communication bus (101), wherein each one of the plurality of voltage converter units is coupled to the digital control and communication bus (as shown in fig. 1; page 3, lines 19-21); and a
5 master control device (102) coupled to the digital control and communication bus (as shown in fig. 1); wherein the master control device is operable to control the plurality of voltage converter units through communicating with the plurality of voltage converter units over the digital control and communication bus (page 3, lines 19-21 and page 4, lines 1-6).

10

Conclusion

Any inquiry concerning this communication or earlier communications from the Examiner should be directed to James Sugent whose telephone number is (571) 272-5726. The Examiner can normally be reached on 8AM - 4PM.

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If attempts to reach the Examiner by telephone are unsuccessful, the Examiner's supervisor, Lynne Browne can be reached on (571) 272-3670. The fax phone number for the organization where this application or proceeding is assigned is (571) 273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at (866) 217-9197 (toll-free). If you would

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like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or (571) 272-1000.

James F. Sugent
Patent Examiner, Art Unit 2116
September 11, 2006

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